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Asher et al.

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[54] LIQUID MEMBRANE GENERATOR

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[58] **Field of Search** ..... 252/359 R, 359 A, 306, 252/314, 302, 303, 304; 261/DIG. 26; 264/4

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[57] **ABSTRACT**

An apparatus is disclosed for generating a multiple phase dispersion and distributing said multiple phase dispersion as globules in a suspension phase. The apparatus comprises a conduit for introducing a first fluid under pressure into a first zone including a porous fluid dispersing layer. This first zone is in fluid communication with a second zone through the porous fluid dispersing layer. The second zone has introduced into it a second fluid under pressure through inlets. The first fluid is dispersed as bubble-like micro droplets in the second fluid by passage from the first zone through the fluid dispersing layer into the fluid in the second zone. An outlet zone is in contact with the second zone and comprises a perforated nonporous layer having an outer and inner surface and includes a porous flow distribution layer substantially in contact with the inner second zone facing surface of the nonporous layer. The multiple phase dispersion formed in the second zone enters the outlet zone through the porous flow distribution layer and exits the outlet zone as globules of predetermined size through the perforations where the outer surface of said perforated nonporous layer forms an interface with a suspension phase which is immiscible with the second fluid.

The instant invention further relates to a process for generating multiple phase dispersions as globules in a suspension phase.

26 Claims, 3 Drawing Figures

SCHEMATIC FLOW DIAGRAM OF LIQUID MEMBRANE GENERATOR